



ELECTRONIC TUBE REFERENCE

4021A

Voltage - Triode (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Directly heated low-impedance oxide-filament triode with published audio operating conditions, load resistance, output, and harmonic-performance data.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	4 V / 250 mA	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
PLATE RESISTANCE	2000 Ω
TRANSCONDUCTANCE	0.003 S
AMPLIFICATION FACTOR	6
<i>Published ratings/characteristics promoted; remaining useful source values represented as parameters.</i>	

Standard Valves 4021A is an oxide-coated directly heated triode. The sheet publishes its filament rating, static constants, interelectrode capacitances, and a table of typical anode/grid/load operating conditions with output and harmonic performance. Oxide-coated filament low-impedance triode, medium 4-pin bayonet-thrust base.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1937 Standard Valves

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1937 STANDARD VALVES

Section 1 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Anode Capacitance	9.1 pF	Published specification
Anode-Filament Capacitance	4.6 pF	Published specification
Grid-Filament Capacitance	8 pF	Published specification

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Characteristic Anode Current	23 mA	For impedance/amplification factor/transconductance values

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output Power	140 mW	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=2050ohm
Total Harmonics Below Fundamental	27 dB	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=2050ohm
Output Power	100 mW	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=4100ohm
Total Harmonics Below Fundamental	31.5 dB	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=4100ohm

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output Power	87 mW	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=6150ohm
Total Harmonics Below Fundamental	35 dB	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=6150ohm
Output Power	65 mW	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=1750ohm
Total Harmonics Below Fundamental	31 dB	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=1750ohm
Output Power	63 mW	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=2900ohm
Total Harmonics Below Fundamental	32.5 dB	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=2900ohm
Output Power	56 mW	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=5250ohm
Total Harmonics Below Fundamental	38 dB	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=5250ohm
Output Power	160 mW	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=2100ohm

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Total Harmonics Below Fundamental	24 dB	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=2100ohm
Output Power	125 mW	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=4200ohm
Total Harmonics Below Fundamental	30.4 dB	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=4200ohm
Output Power	107 mW	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=6300ohm
Total Harmonics Below Fundamental	33 dB	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=6300ohm
Output Power	250 mW	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=1800ohm
Total Harmonics Below Fundamental	28 dB	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=1800ohm
Output Power	180 mW	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=3600ohm
Total Harmonics Below Fundamental	33.5 dB	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=3600ohm

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output Power	158 mW	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=5400ohm
Total Harmonics Below Fundamental	35.5 dB	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=5400ohm



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1946 Standard Telephone and Cables

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1946 STANDARD TELEPHONE AND CABLES

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	4 V	—
Heater/filament current	250 mA	—
Plate resistance	2000 ohm	—
Transconductance	0.003 A/V	—
Amplification factor	6	—

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker